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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,276	01/20/2006	Patrick Gehlen	32860-000989/US	7963
30596 7590 11/23/2011 HARNESSE, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195				
EXAMINER GAMIL, TEJAL				
ART UNIT 2122		PAPER NUMBER		
NOTIFICATION DATE 11/23/2011		DELIVERY MODE ELECTRONIC		

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* PATRICK GEHLEN, WERNER KRAMER, BERNHARD  
WIESGICKL, and ROMAN WUNSCHIK

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Appeal 2009-012831  
Application 10/565,276<sup>1</sup>  
Technology Center 2100

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Before JEFFREY S. SMITH, MICHAEL R. ZECHER, and  
BRUCE R. WINSOR, *Administrative Patent Judges*.

ZECHER, *Administrative Patent Judge*.

DECISION ON APPEAL

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<sup>1</sup> Filed on January 20, 2006. This application is a national stage entry of PCT/EPO4/07251, filed on July 2, 2004. PCT/EPO4/07251 claims foreign priority to EPO application 03016734.0, filed July 22, 2003. The real party in interest is Siemens Aktiengesellschaft. (App. Br. 1.)

# I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) (2002) from the Examiner's Final Rejection of claims 1-14. (App. Br. 2.) We have jurisdiction under 35 U.S.C. § 6(b) (2008).

We affirm.

## *Appellants' Invention*

Appellants invented an apparatus that simplifies the coupling of bus systems by coupling a device to two field buses and a periphery bus, thereby allowing data transfer between the three buses. (Abstract.)

## *Illustrative Claim*

1. A coupling apparatus for data buses, comprising:
  - a first connecting device for a first data bus;
  - a second connecting device for a second data bus, as additional to the first connecting device;
  - a data processing device, connected to the first and the second connecting device to allow data to be interchanged between the data buses; and
  - a third connecting device, connected to the data processing device, for a third data bus, as additional to the first and second data buses, to allow data to be interchanged between the three data buses, wherein
    - the second data bus is a different type of bus system than the first data bus, and
    - the third data bus is a different type of bus system than the first data bus and the second data bus.

*Prior Art Relied Upon*

Krivoshein                      US 6,449,715 B1                      Sept. 10, 2002

*Rejections on Appeal*

Claims 1-14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Krivoshein.

*Appellants' Contentions*

Appellants contend that Krivoshein does not describe “a data processing device,” connected to at least three connecting devices, “to allow data to be interchanged between data buses,” wherein “the second data bus is a different type of bus system than the first data bus, and the third data bus is a different type of bus system than the first data bus and the second data bus,” as recited in independent claim 1. (App. Br. 10.) In particular, Appellants argue that Krivoshein’s disclosure of a controller connected to a Fieldbus device network, a HART device network, a Profibus device network, and an Actuator Sensor-Interface (hereinafter “AS-Interface”) network, amounts to a controller that separately controls processes within the different device networks without exchanging data between the devices on the different device networks. (*Id.* at 10-15.) In response to the Examiner’s Answer, Appellants reiterate that Krivoshein, at best, discloses a controller that separately controls the devices in each different device network, but fails to describe allowing data to be exchanged or interchanged between devices on the different data buses. (Reply Br. 1-2.)

*Examiner's Findings and Conclusions*

The Examiner finds that Krivoshein’s disclosure of a controller coupled to numerous field devices within different data buses, including a Fieldbus device network, a HART device network, a Profibus device

network, and an AS-Interface device network, describes a controller that “allows” data to be interchanged, as recited in independent claim 1. (Ans. 7.) Moreover, the Examiner finds that Appellants’ arguments are not commensurate in scope with the claim language because independent claim 1 recites “interchanged,” not exchanged. (*Id.* at 8.) The Examiner finds that Krivoshein clearly describes interchanging data (i.e., common, shared data) between the different buses. (*Id.*)

## II. ISSUE

Has the Examiner erred in finding that Krivoshein anticipates independent claim 1? In particular, the issue turns on whether Krivoshein describes the following claim limitations as recited in independent claim 1:

- (a) “a data processing device...to allow data to be interchanged between the data buses;” and
- (b) “the second data bus is a different type of bus system than the first data bus, and the third data bus is a different type of bus system than the first data bus and the second data bus.”

## III. FINDINGS OF FACT

The following Findings of Fact (hereinafter “FF”) are shown by a preponderance of the evidence.

### *Krivoshein*

FF 1. Krivoshein’s figure 1 depicts a process control system that includes a controller connected to a local input/output (hereinafter “I/O”), a specialized I/O, and remote I/O device networks. (Col. 6, ll. 65-67.) In particular, Krivoshein discloses that the controller (12) is coupled to

numerous field devices within different device networks, including a Fieldbus device network (30), a HART device network (32), a Profibus device network (34), and an AS-Interface device network (46) via local connections or lines. (Col. 7, ll. 42-47.) Krivoshein also discloses that the controller (12) oversees one or more process control routines, and communicates with devices within the device networks (30, 32, 34, and 36) and with the host workstations (14) to both control a process and provide information pertaining to the process to a user. (*Id.* at ll. 51-56.)

FF 2. Krivoshein discloses that the Fieldbus network (30) includes Fieldbus devices (40) connected via Fieldbus link (42) to a Fieldbus master I/O device (44) which, in turn, is connected to the controller (12) via a local connection. (*Id.* at ll. 57-61.) Krivoshein discloses that the Profibus network (34) includes three Profibus slave devices (50, 51, and 52) connected via a Profibus link or bus (53) to a Profibus master I/O device (55). (Col. 8, ll. 21-23.) Krivoshein discloses that the AS-Interface network (36) includes an AS-Interface master I/O device (60) connected to numerous AS-Interface field devices (62-65) via an AS-Interface bus or link (66). (Col. 10, ll. 7-10.)

FF 3. Krivoshein's figure 2 depicts implementing a configurator (76) that configures a device network and enables communication between the controller (12) and one or more devices within a device network. (Col. 15, l. 59-col. 16, l. 1.) In particular, Krivoshein discloses that configurator may store and use different configuration routines in order to configure each of the different device types within the device networks. (Col. 16, ll. 6-8.) That is, Krivoshein discloses that the configurator (76) has a different

configuration routine for each of a Fieldbus, HART, Profibus, and AS-Interface device network. (*Id.* at ll. 8-11.)

#### IV. ANALYSIS

##### *Claim 1*

We do not find error in the Examiner's anticipation rejection of independent claim 1. Independent claim 1 recites, *inter alia*: 1) "a data processing device...to allow data to be interchanged between the data buses;" and 2) "the second data bus is a different type of bus system than the first data bus, and the third data bus is a different type of bus system than the first data bus and the second data bus."

We agree with the Examiner's position that Krivoshein's disclosure of a controller coupled to numerous field devices within different device networks (i.e., Fieldbus device network, Profibus device network, and AS-Interface device network) (FF 1) describes "a data processing device," as recited in independent claim 1. In particular, we find that Krivoshein's controller works in conjunction with a configurator, such that the different device types within each device network are capable of being configured in a way that data transfer between each device and the controller is based on different configuration routines. (FFs 1 and 3). Consequently, we find that Krivoshein implicitly discloses configuring the different device types within each device network to reciprocally exchange data via the controller. Therefore, we find that Krivoshein describes "a data processing device...to allow data to be interchanged between the data buses," as claimed.

We also agree with the Examiner that Krivoshein's disclosure of AS-interface link or bus, which is different from the Profibus link or bus (FF 2),

describes “the second data bus is a different type of bus system than the first data bus,” as claimed. Moreover, we find that Krivoshein’s disclosure of the Fieldbus link, which is different than the links or buses associated with both the Profibus and AS-Interface device networks (*id.*), describes “the third data bus is a different type of bus system than the first data bus and the second data bus,” as claimed. It follows that the Examiner has not erred in finding that Krivoshein anticipates independent claim 1.

*Claims 2, 4-11, 13, and 14*

Appellants do not provide separate and distinct arguments for patentability with respect to dependent claims 2, 4-11, 13, and 14. (*See* App. Br. 9.) Consequently, we accept Appellants’ grouping of dependent claims 2, 4-11, 13, and 14 with independent claim 1. (*Id.*) Therefore, dependent claims 2, 4-11, 13, and 14 fall with independent claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii).

*Claim 3*

Appellants contend that a protocol refers to a format in which a type of data is communicated, not the type of data itself. (App. Br. 16.) Consequently, Appellants argue that Krivoshein does not describe the “semantics of the data,” as recited in dependent claim 3. (*Id.* at 16-17.) The Examiner finds that Krivoshein’s cited disclosure (*see* col. 10, ll. 1-6, col. 14, ll. 1-4, or col. 21, ll. 24-27) provides examples that describe the semantics of data, e.g., the type of data to be transferred. (Ans. 10.) In response to the Answer, Appellants contend that each of the textual portions of Krivoshein relied upon by the Examiner fail to describe “data transfer between at least two of the data buses is controllable as a function of the



semantics of the data to be transmitted,” as claimed. (Reply Br. 7-8.) We agree with the Examiner.

As discussed *supra*, Krivoshein’s controller works in conjunction with a configurator, such that the different device types within each device network are capable of being configured in a way that data transfer between each device and the controller is based on different configuration routines. (FFs 1 and 3.) Consequently, we find that Krivoshein discloses configuring the different device types such that data transfer between the links or buses associated with each device and the controller is based on the semantics of the different communication protocols (i.e., Profibus, AS-Interface, and Fieldbus communication protocols). Therefore, we find that Krivoshein describes the disputed claim limitation. It follows that the Examiner has not erred in finding that Krivoshein anticipates dependent claim 3.

#### *Claim 12*

Appellants do not provide separate and distinct arguments for patentability with respect to dependent claim 12. (*See* App. Br. 9.) Consequently, we accept Appellants’ grouping of dependent claim 12 with dependent claim 3. (*Id.*) Therefore, dependent claim 12 falls with dependent claim 3. *See* 37 C.F.R. § 41.37(c)(1)(vii).

### V. CONCLUSION OF LAW

The Examiner has not erred in rejecting claims 1-14 as being anticipated under 35 U.S.C. § 102(e).

## VI. DECISION

We affirm the Examiner's decision to reject claims 1-14 as being anticipated under 35 U.S.C. § 102(e).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

msc